**NORTH WIN THIN TIMBER SALE**

RECONSTRUCTION OF SPECIFIED ROADS

TABLE OF CONTENTS

Cost Estimate Worksheet for Reconstruction Engineering Services C(T)5.213#

**Sale Name** NORTH FORK WIN THIN, Willamette N.F., Middle Fork Ranger District

PRECONSTRUCTION ENGINEERING: All engineering work and expense of preparing for reconstruction engineering services, including the following:

| | Cost ($) |
|---|---|
| 1. Transportation Planning. (All work necessary to complete the NEPA document and decision.) | XXXXXXX |
| 2. Engineering investigations, studies and reports, and reconnaissance, location, etc. | $ 2,560.00 |
| 3. Preliminary location surveys. | $ 2,560.00 |
| ** 4. Soils, foundations, and materials investigations, surveys, tests, structural design and review. | |
| 5. Preliminary and final designs. | $ 2,560.00 |
| 6. Preliminary and final plans, drawings, spec's, and estimates of quantities. | $ 2,560.00 |
| 7. Preparation of Government cost estimate. | XXXXXXX |
| 8. Final location surveys staked on the ground. | $ 2,560.00 |
| 9. Rights-of-way surveys, plans, and descriptions. | $ - |
| ** 10. FE review and approval. | |
| 11. Other (describe) _____ | $ - |

CONSTRUCTION ENGINEERING: All work and expense of setting out, controlling, inspecting and measuring the reconstruction of a forest development transportation facility including:

| | |
|---|---|
| 1. Construction surveys to establish line and grade for the work, to control the work, and to measure quantities. | $ 3,200.00 |
| 2. Redesigning, adjusting, and changing the plans, specifications, etc., to meet encountered conditions. | $ 2,560.00 |
| 3. Inspecting and controlling operations for compliance with plans and specifications. | XXXXXXX |
| 4. Inspecting and testing materials to be installed. | XXXXXXX |
| 5. Inspecting and measuring completed work. | XXXXXXX |
| 6. Processing payments and accepting materials and work. | XXXXXXX |
| ** 7. FE inspection and construction mgt. (include structures). | |

| | |
|---|---|
| I. Project Subtotal (Total of 1-10 and 1-7 above) | $ 23,680 |
| II. S.O. Overhead Account (I*.18) | $ 4,262 |
| III. Project Total = ( I + II ) | $ 27,942 |
| IV. ** FE Account - (4+10+7) | $ 5,120 |
| V. District Account = ( I - IV ) | $ 18,560 |

VI. Total ( I + II ) **To C(T)5.213#** → $ 27,942 FSRE12

Zone
Assistant Forest Engineer _____ Date 1/08/13

NOTE: Do not include entries where XXXXXXX appears.

# NORTH FORK WIN THIN TIMBER SALE

## PROJECT COST

| ROAD NUMBER | SPECIFIED ROAD COST | |
|---|---|---|
| | Timber Sale | Public Works |
| 1802 | $49,358.84 | $66,634.43 |
| 1802150 | $126,026.16 | $170,135.32 |
| 1802159 | $25,887.87 | $34,948.62 |
| TOTAL SPECIFIED ROAD COSTS | $201,272.87 | $271,718.37 |
| ENGINEERING DEPOSIT | $27,942.00 | |
| TOTAL | $229,214.87 | |

North Fork Win Thin Timber Sale prospectus should show 120 days for award of contract if bidder elects to have the Forest Service reconstruct the roads. If the sale is not sold by 4/31/2013 please advise us so we can modify the Road Completion Date of 10/31/14.

REVIEWED BY ZONE ENGINEER: _____ DATE 1/08/13

## SCHEDULE OF ITEMS

Timber Sale: North Fork Win Thin — Name: Winberry

Project: 1802 Reconstruction — Length 9.10 Miles

| ITEM NO. | DESCRIPTION | UNIT | QUANTITY | UNIT PRICE | SPECIFIED ROAD COST |
|---|---|---|---|---|---|
| 15757 | Erosion Control & Pollution Prevention | Each | 1 | $894.96 | $894.96 |
| 20253 | Removal of individual trees, miscellaneous: disposal of tops & limbs f & logs f | Each | 25 | $64.08 | $1,602.00 |
| 20358 | Removal of culvert, disposal method (a) | Each | 2 | $432.06 | $864.12 |
| 20419A | Drainage excavation, type outlet ditch | Foot | 20 | $15.06 | $301.20 |
| 20419B | Drainage excavation, type ditch | Foot | 25 | $19.58 | $489.50 |
| 20477 | Drainage excavation, type outlet ditch with settling pond | Lump Sum | ALL | $301.18 | $301.18 |
| 23051 | Roadside brushing, disposal method 1 | Mile | 3.48 | $760.00 | $2,644.80 |
| 25101 | Placed Riprap, class 3 | Cubic Yard* | 7 | $83.73 | $586.11 |
| 30304 | Road reconditioning, ditch | Mile | 0.14 | $1,840.00 | $257.60 |
| 30359 | Roadway reconditioning, compaction E | Mile | 5.62 | $2,960.00 | $16,635.20 |
| 32203 | Aggregate base, grading D, compaction method B | Cubic Yard* | 530 | $40.70 | $21,571.00 |
| 60276A | 18-inch corrugated aluminized steel pipe, 0.064-inch thickness, method B | Foot | 78 | $29.27 | $2,283.06 |
| 60604 | Anchor, set | Each | 2 | $50.12 | $100.24 |
| 60605 | Pipe elbow, hinged | Each | 1 | $81.25 | $81.25 |
| 60655 | 18-inch full-circle aluminized steel outlet pipe | Foot | 20 | $20.09 | $401.80 |
| 60708 | Cleaning culverts in place | Each | 1 | $344.82 | $344.82 |
| | | | | Total | $49,358.84 |

* denotes contract quantities.

## SCHEDULE OF ITEMS

Timber Sale: North Fork Win Thin

Name: South Fork Winberry

Project: 1802150 Reconstruction

Length 1.12 Miles

| ITEM NO. | DESCRIPTION | UNIT | QUANTITY | UNIT PRICE | SPECIFIED ROAD COST |
|---|---|---|---|---|---|
| 15101 | Mobilization | Lump Sum | All | $14,909.00 | $14,909.00 |
| 20253 | Removal of individual trees, miscellaneous: disposal of tops & limbs f & logs f | Each | 30 | $64.08 | $1,922.40 |
| 20303 | Removal of existing asphalt | Square Yard* | 16.5 | $22.15 | $365.48 |
| 23051 | Roadside brushing, disposal method 1 | Mile | 1.12 | $760.00 | $851.20 |
| 30304 | Road reconditioning, ditch | Mile | 1.12 | $1,840.00 | $2,060.80 |
| 40451 | ODOT 1/2-inch dense graded HMAC, level II, asphalt cement PG 64-22 | Ton | 326.19 | $205.00 | $66,868.95 |
| 41001 | Slurry Seal, type II | Square Yard* | 11351.8 | $3.19 | $36,212.24 |
| 57301 | Minor Bridge Repair | Lump Sum | All | $2,036.09 | $2,036.09 |
| 62509 | Mulching, dry method | Lump Sum | All | $800.00 | $800.00 |
| | | | | Total | $126,026.16 |

* denotes contract quantities.

## SCHEDULE OF ITEMS

Timber Sale: North Fork Win Thin

Name:

Project: 1802159 Reconstruction

Length 2.97 Miles

| ITEM NO. | DESCRIPTION | UNIT | QUANTITY | UNIT PRICE | SPECIFIED ROAD COST |
|---|---|---|---|---|---|
| 20253 | Removal of individual trees, miscellaneous: disposal of tops & limbs f & logs f | Each | 23 | $64.08 | $1,473.84 |
| 20358 | Removal of culvert, disposal method (a) | Each | 1 | $432.06 | $432.06 |
| 20420 | Drainage excavation, type catch basin | Each | 1 | $76.18 | $76.18 |
| 23051 | Roadside brushing, disposal method 1 | Mile | 2.97 | $760.00 | $2,257.20 |
| 30359 | Roadway reconditioning, compaction E | Mile | 2.97 | $2,960.00 | $8,791.20 |
| 32203 | Aggregate base, grading D, compaction method B | Cubic Yard* | 280 | $40.70 | $11,396.00 |
| 60276A | 18-inch corrugated aluminized steel pipe, 0.064-inch thickness, method B | Foot | 30 | $29.27 | $878.10 |
| 60604 | Anchor, set | Each | 2 | $50.12 | $100.24 |
| 60605 | Pipe elbow, hinged | Each | 1 | $81.25 | $81.25 |
| 60655 | 18-inch full-circle aluminized steel outlet pipe | Foot | 20 | $20.09 | $401.80 |
| | | | | Total | $25,887.87 |

* denotes contract quantities.

**A7 – Specified Roads**, applicable to B5.2

Name and Date of Governing Road Specifications: Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects(FP-03)-U.S. Customary Units – 2003.

| Project | | Design Class* | Approx. Length *(mi./km.)* | Sheet Numbers and Approval Date | Performance Responsibility | | |
|---|---|---|---|---|---|---|---|
| Road No. | Name | | | | Survey | Design | Const. Staking 1/ |
| 1802000 | Winberry Creek | SL/14/15/R/ 3/B | 9.1/ 14.65 | 1-15 August 2012 | USFS | USFS | USFS (BC) |
| 1802150 | South Winberry | SL/12/15/R/ 2/B | 1.12/ 1.80 | 1-15 August 2012 | USFS | USFS | USFS (BC) |
| 1802159 | | SL/12/10/R/ 2/C | 2.97/ 4.78 | 1-15 August 2012 | USFS | USFS | USFS (BC) |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

1/ Indicate timing, i.e., before clearing (BC) or after clearing (AC). Applicable to B5.212.

* Number of Lanes / Road Width / Design Speed / R (reconstruction) of C (construction) / Maintnance Level / Traffic Service Level

**A8 – Forest Service Engineering Completion Schedule**, applicable to B5.21

| Road No. | Road Name | Type of Work | Completion Date |
|---|---|---|---|
| N/A | | | |
| | | | |
| | | | |
| | | | |
| | | | |

C5.12# – USE OF ROADS BY PURCHASER. (6/99) Purchaser's use of existing roads identified on Sale Area Map by the following codes is prohibited or subject to restrictive limitations, unless agreed otherwise:

| Code | Use Limitations |
|---|---|
| X | Hauling prohibited |
| R | Hauling restricted |
| U | Unsuitable for hauling prior to completion of agreed reconstruction |
| P | Use prohibited |
| A | Public use restriction |
| W | Regulation waiver |

Roads coded A will be signed by Forest Service to inform the public of use restrictions. Purchaser's use of roads coded R, A, or W shall be in accordance with the following restrictions:

**Restricted Road List**

| Road Number | Road Name | Termini From | Termini To | Map Legend | Description of Restrictions |
|---|---|---|---|---|---|
| 1802038 | | Jct. 1802834 | End of Road | R | * |
| 1802054 | | Jct. 1802158 | End of Road | R | * |
| 1802158 | | Jct. 1802 | End of Road | R | * |
| 1802159 | | Jct. 1802150 | Jct. 1802188 | R | * |
| 1802188 | | Jct. 1802159 | End of Road | R | * |
| 1802819 | | Jct. 1802 | End of Unit | R | * |
| 1802822 | | Jct. 1802 | End of Road | R | * |
| 1802834 | | Jct. 1802 | End of Road | R | * |
| 1802842 | | Jct. 1802188 | End of Road | R | * |
| 1802954 | | Jct. 1802159 | End of Road | R | * |
| 1802 | | End Asphalt | End of Unit | R | * |
| | | | | | |

* Roads have limited structural strength, haul is restricted during wet weather.

Title and date of Governing Road Rules Document:

| | |
|---|---|
| Road Rules for Commercial Haul Willamette National Forest Commercial Road Rules | January 1999 Effective Date |

C5.13# – ROAD COMPLETION DATE. (4/04) Construction of Specified Roads shall be completed no later than 1/ 10/31/2014 ; except for earlier construction completion dates for roads listed below:

| Road Number | Road Name | Station | | Completion Date |
|---|---|---|---|---|
| | | From | To | |
| NA | | | | |
| | | | | |
| | | | | |

Completion date is binding on the party that constructs road, whether Purchaser or Forest Service. Contracting Officer shall modify the completion date in writing to conform to the approved Plan of Operations under B6.311 at the request of Purchaser.

When Purchaser elects Forest Service construction of Specified Roads shown in sale advertisement, Forest Service may adjust construction completion date when road construction is delayed or interrupted for causes that qualify for an adjustment of the completion date of Forest Service's road construction contract. When qualifying delays or interruptions of road construction occur, Forest Service shall evaluate such occurrences and document any findings. The current status of any adjustment shall be available to Purchaser on request. Promptly after the end of Normal Operating Season in which qualifying days occur, Forest Service shall give Purchaser written notice of (a) number of qualifying days claimed, and (b) new construction completion dates. After all road construction is complete, Forest Service shall grant Contract Term Adjustment. Such adjustment shall be limited to road completion date delays that occurred during Normal Operating Season.

If Forest Service is responsible for road construction and the actual date of road completion is 1 year or more after the completion date stated above, Purchaser may request a rate redetermination under B3.3 for remaining volume. Such request must be made within 30 days of notification that road construction has been completed. Upon receipt of such request, Forest Service shall redetermine rates using standard methods in effect on the completion date of road construction. Rates to be established shall apply to all timber removed from Sale Area after the effective date of the rate redetermination.

Forest Service shall in no way be responsible for any delay or damage caused by road contractor in performing the road construction, except such delay as may be the fault or negligence of Forest Service.

When Purchaser constructs Specified Roads and requests Contract Term Adjustment, completion dates shall be adjusted by number of days that qualify for such adjustment, provided such qualifying days occur before specified construction completion date. When Purchaser desires to construct an alternate facility under B5.26, Forest Service and Purchaser shall agree, in writing, on a construction completion date for alternate facility. Contract Term Adjustment as noted above will apply. Completion date shall be adjusted where a Design Change or physical changes necessitate a modification of Specified Road construction work that increases the scope or magnitude of the required work.

If Purchaser fails to complete construction of any or all Specified Roads by applicable completion date, as adjusted, Contract Term Extension shall not be granted.

As used in this Subsection, construction of a road is completed when:

(a) Purchaser constructs Specified Roads and Forest Service furnishes Purchaser with written notice of acceptance under B6.36 or

(b) Forest Service constructs road and furnishes Purchaser with written notice authorizing use of road.

C5.13# – ROAD COMPLETION DATE. (4/04) (Continued)

Notwithstanding B5.1, Purchaser shall not use a road that Purchaser has elected for Forest Service to construct, until construction is completed and Forest Service furnishes Purchaser with written notice authorizing use of road.

***WO-C5.213#***

C5.213# – DEPOSIT FOR RECONSTRUCTION ENGINEERING SERVICES. (4/04) Purchaser shall make a cash deposit for engineering services (preconstruction and construction) provided by Forest Service for reconstruction of National Forest system roads necessary to accommodate Purchaser's use under this contract, pursuant to 16 USC 537.

The total amount to be deposited by Purchaser for reconstruction related engineering services to be completed by Forest Service personnel or by public works contract is **$27,942.00** Purchaser shall make this deposit at the end of the first full Normal Operating Season or 12 months from contract award, whichever occurs first. In the event a different deposit schedule is agreed to, such deposit shall be due within 15 days after the date of issue indicated on the initial bill for collection, pursuant to B4.4.

The amount of the required deposit will be shown as an associated charge on Purchaser's Timber Sale Account. Forest Service shall retain any unexpended deposit for reconstruction related engineering services.

The deposit for reconstruction related engineering services shall be commensurate with project need and Purchaser's road use. Forest Service shall complete reconstruction related engineering services on the following schedule unless a different completion schedule is agreed in writing:

| Road or Facility No. | Termini | | Engineering Services Completion Date |
|---|---|---|---|
| | From | To | |
| 1802 | MP 0.00 | MP 9.10 | 10/31/2014 |
| 1802150 | MP 0.00 | MP 1.12 | 10/31/2014 |
| 1802159 | MP 0.00 | MP 2.97 | 10/31/2014 |
| | | | |

Reconstruction related engineering services may consist of some or all of the engineering work and expense of: preparing, setting out, controlling, inspecting, and measuring the reconstruction of a National Forest system road.

C5.221# – MATERIAL SOURCES. (4/04) Sources of local materials are designated on Plans and Sale Area Map. Forest Service assumes responsibility for the quality and quantity of material in designated sources. Purchaser shall determine the equipment and work required to produce the specified product, including the selection of acceptable material that is reasonably available in the source that meets specifications. The designation of source includes the rights of Purchaser to use certain area(s) for plant site, stockpiles, and haul roads.

Should the designated source, due to causes beyond the control of Purchaser, contain insufficient acceptable material, Forest Service will provide another source with adjustment in accordance with B5.253.

When Purchaser elects not to use designated sources, Purchaser shall furnish the specified product with no adjustment in unit rates. Quality testing shall be the responsibility of Purchaser. Test results shall be furnished to Forest Service.

When Purchaser elects not to use designated sources and the Schedule of Items lists pit development separately, cost allowance will be reduced under B5.253 when Forest Service determines the work will not be required.

When materials are subject to a weight measurement, the specific gravity or weight/volume relationship used as a basis for determination of estimated quantities shall be:

Source I **N/A**, Source II _____, and Source III _____.

Purchaser may, when agreed in writing, use on the project such suitable stone, gravel, and sand, or other material found in the excavation, and will earn a cost allowance for the excavation of such materials at the corresponding contract unit price and for the pay items for which the excavated material is used. Purchaser shall replace, without additional cost allowance, sufficient suitable materials to complete the portion of the work that was originally contemplated to be constructed with such material. Purchaser shall not excavate or remove any material, except that which is within the excavation limits, without written authorization from Forest Service.

When material is appraised from non-National Forest designated sources, owner charges for the material in terms of unit cost for royalties, purchase of raw materials, or finished products shall be as follows until 1/ N/A:

| Material | Type of Purchase | Owner(s) | Unit of Measure | Unit Price | Estimated Quantity | Total |
|---|---|---|---|---|---|---|
| N/A | | | | | | |
| | | | | | | |
| | | | | | | |

Should quantity vary from that estimated, payment to owners shall be for units actually obtained. Purchaser shall make arrangements with owner(s) for measurement and payment for royalties, purchase of raw materials, or finished products, as shown above.

Materials produced or processed from National Forest lands in excess of the quantities required for performance of this contract are the property of Forest Service, unless prior written agreement has been obtained to use excess material on other National Forest sales. Forest Service is not obligated to reimburse Purchaser for the cost of their production.

Materials shall be stored to assure the preservation of their quality and fitness for the work. Stored materials shall be located to facilitate their prompt inspection. Sites on Forest Service administered land,

approved by Forest Service, may be used for storage purposes and for the placing of Purchaser's plant

C5.221# – MATERIAL SOURCES. (4/04) (Continued)

equipment. All storage sites provided by Forest Service shall be restored at Purchaser's expense. Purchaser shall be responsible for making arrangements for storage on other than Forest Service administered lands.

When the construction of the portion of the project for which Temporary Roads used for hauling materials is completed, all such Temporary Roads shall be restored as nearly as practicable to their original ground profile, unless otherwise agreed in writing.

C6.24# – SITE SPECIFIC PROTECTION MEASURES (04/2004)

Special protection measures needed to protect known areas identified on Sale Area Map or on the ground include:

Cultural Resource Protection Measures: N/A

Wildlife and Botanical Protection Measures:
**Instream work period July 1 to October 15. Wildlife restriction between March 1 to July 15.**

Cave Resource Protection Measures: N/A

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE --- REGION SIX

WILLAMETTE NATIONAL FOREST

**MIDDLE FORK RANGER DISTRICT**
**Lane County, Oregon**

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PLANS FOR PROPOSED

# NORTH FORK WIN THIN TIMBER SALE
ROADS

| ROAD NO. | LENGTH/MILES | CONST./RECONST. |
|---|---|---|
| 1802 | 9.10 | Reconstruction |
| 1802150 | 1.12 | Reconstruction |
| 1802159 | 2.97 | Reconstruction |

INDEX TO SHEETS



Designed by:
Name 10/9/12 Date

Reviewed by:
Name 10/10/12 Date

Reviewed by:
Asst. Development Engineer 10/10/12 Date

Recommended by:
Zone Engineer 1/08/13 Date

Approved by:
District Ranger 1/8/2013 Date

for Forest Engineer 10/15/2012 Date

## GENERAL NOTES

1. Remove all berms, previously existing or created, unless designated to remain, to allow drainage of water from the traveled way.

2. Salvage existing aggregate during culvert removal and use as bedding / backfill material around pipe during installation.

3. The Contracting Officer will designate the specific disposal areas prior to placement of material. General locations are noted in the Reconstruction Summaries. Smooth and shape material to drain with 6' Maximum height of material, 1V:2H slopes. Reconstruct ditchline between road and disposal site.

4. Do not undercut backslopes when cleaning and/or reconstructing ditchline.

5. Spread government furnished straw over all areas where soil has been disturbed by work, excluding ditches. Cover area's completely. Straw is stored at the Flat Creek Work Center, located on FS road 24, 2 miles east of the town Oakridge. Contact the CO to arrange for pick up.

6. Recondition roadbed, including turnouts and curve widening, to the dimensions existing on the ground.

7. Timing / date restrictions are included in C6.24 and C6.315 of the timber sale provisions and specifications and in FSSS 156.05.

8. Rebuild fills with a maximum of 1V:1.5H fill slopes and minimum 1' shoulders.

9. Unsuitable material encountered in excavation is to be hauled to designated disposal areas. Suitable material is available at Point Ten Pit on Road 1802, T19S, R2E, Sec 27, SW of NE, as marked by CO. Adjustments to contract costs will be made according to Timber Sale Provision B(T) 5.253(i).

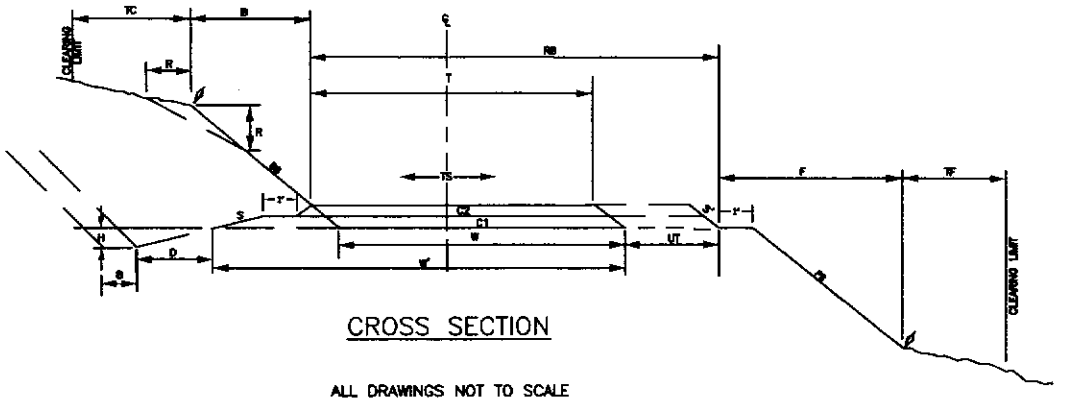
10. Construct outlet ditches to have an elevation matching the bottom of the outlet and a bottom of ditch width not less than that of the respective culvert diameter. Construct outlet ditches in existing flow channel unless marked by CO otherwise.

11. Where necessary, lower CMP installations to obtain a minimum fill cover of 1' not including surface rock.

12. All utility locates, permits and water rights are the responsibility of the purchaser.

# ROAD STRUCTURE DETAIL

| PROJECT | SHEET |
|---|---|
| NORTH FORK WIN TIMBER SALE | 5 OF 15 |



CROSS SECTION

ALL DRAWINGS NOT TO SCALE

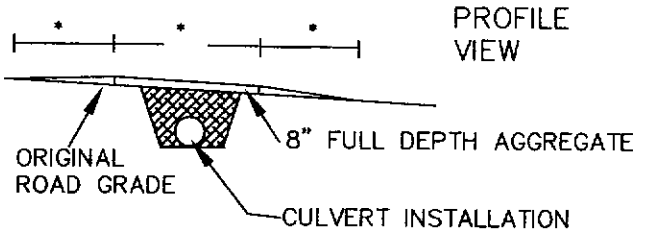
| ROAD NUMBER | MILE POST | TO MILE POST | CONSTRUCTION TOLERANCE | GRADING | | | | PAVEMENT STRUCTURE | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | OUTSLOPE (0) INSLOPE (1) CROWN (C) % | ROADBED WIDTH ft | DITCH DIMENSIONS ft | | TRAVELED WAY WIDTH ft | GRADATION | | COMPACTED DEPTH Inch | | ROCK SLOPE |
| | | | | | | D | H | F | C1 | C2 | C1 | C2 | V:H |
| 1802 | 5.60 | 9.08 | C | 2(C) | -- | 2* | 1* | 14 | | D | | — | 1:2 |
| 1802 | 9.08 | 9.77 | C | 5(C) | -- | 2* | 1* | 14 | | D | | — | 1:2 |
| 1802 | 9.77 | 12.67 | C | 2(C) | -- | 2* | 1* | 14 | | D | | — | 1:2 |
| 1802 | 12.67 | 14.70 | C | 5(C) | -- | 2* | 1* | 14 | | D | | — | 1:2 |
| 1802150 | 0.00 | 1.12 | C | 2(C) | -- | 2* | 1* | 12 | | D | | — | 1:2 |
| 1802159 | 0.00 | 2.97 | C | 2(C) | -- | 2* | 1* | 12 | | D | | — | 1:2 |

* DIMENSIONS MARKED WITH AN ASTERISK MAY BE ADJUSTED DURING CONSTRUCTION BY THE CO TO FIT SITE GEOMETRY.

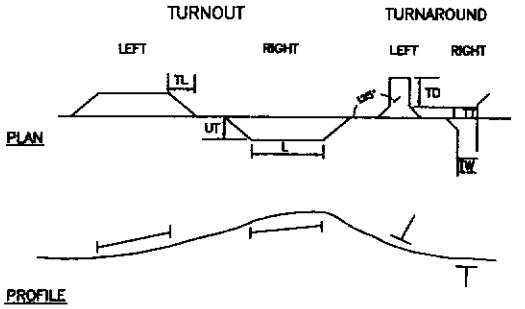
## CULVERT SURFACE ROCK

PLACE CRUSHED AGGREGATE AT EACH CULVERT INSTALLATION TO MATCH EXISTING ROADBED WIDTH.

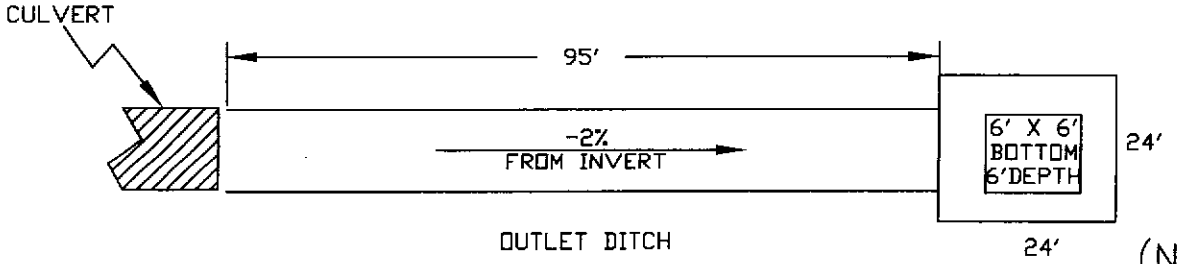
* PLACE CRUSHED AGGREGATE AT EACH CULVERT INSTALLATION AS STATED IN THE ROAD RECONSTUCTION SUMMARY.

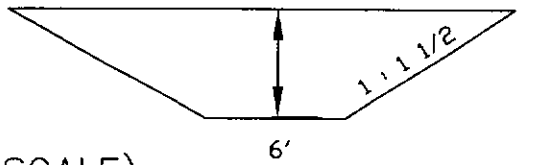



## TURNOUT AND TURNAROUND SYMBOLS




# OUTLET DITCH W/SETTLING POND




(NOT TO SCALE)

## DRAINAGE LISTING

| M.P. | CMP | Outlet Pipe | As Built | | Dimensions | | Installation Details | | | Misc. Items | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Size | Thick | Type | Grade | Skew | Gaskets | Head Wall | Anchor Sets | Outlet Ditch | |
| | Feet | Feet | M.P. | Feet | Inch | FE Inch | | % | Deg | | C.Y. | Each | Feet | |
| **Road 1802** | | | | | | | | | | | | | | |
| 8.82 | | | | | | | | | | | 2 | | * | Outlet Ditch Reconstruction/Settling Pond - See sheet 5 of 15 . |
| 10.55 | | | | | | | | | | | | | | Removal of boulder and debris - See sheet 10 of 15. |
| 10.94 | 42 | 20 | | | 18 | 0.064 | # | # | # | 1 | 5 | 2 | | 16 gauge. Extend inlet 1' beyond existing inlet, reconstruct 25' ditch and place 15' riprap apron as staked by CO. |
| 11.44 | 36 | | | | 18 | 0.064 | # | # | # | 1 | | | 20 | 16 gauge. Lower outlet 1', construct 20' outlet ditch. |
| | | | | | | | | | | | | | | |
| **Road 1802159** | | | | | | | | | | | | | | |
| 2.72 | 30 | 20 | | | 18 | 0.064 | # | # | # | 1 | | 2 | | 16 gauge. Extend inlet 1' beyond existing inlet, reconstruct catchbasin. |
| | | | | | | | | | | | | | | |
| THE ABOVE INSTALLATIONS INCLUDE CONNECTING BANDS | | | | | | | | | | | | | | |

NOTE: Standard pipe corrugation will be 2 2/3 inch X 1/2 inch unless otherwise noted.

# Skew, grade and type shall match removed installation unless otherwise noted.

* As staked on ground by C.O. or as identified in reconstruction summary.

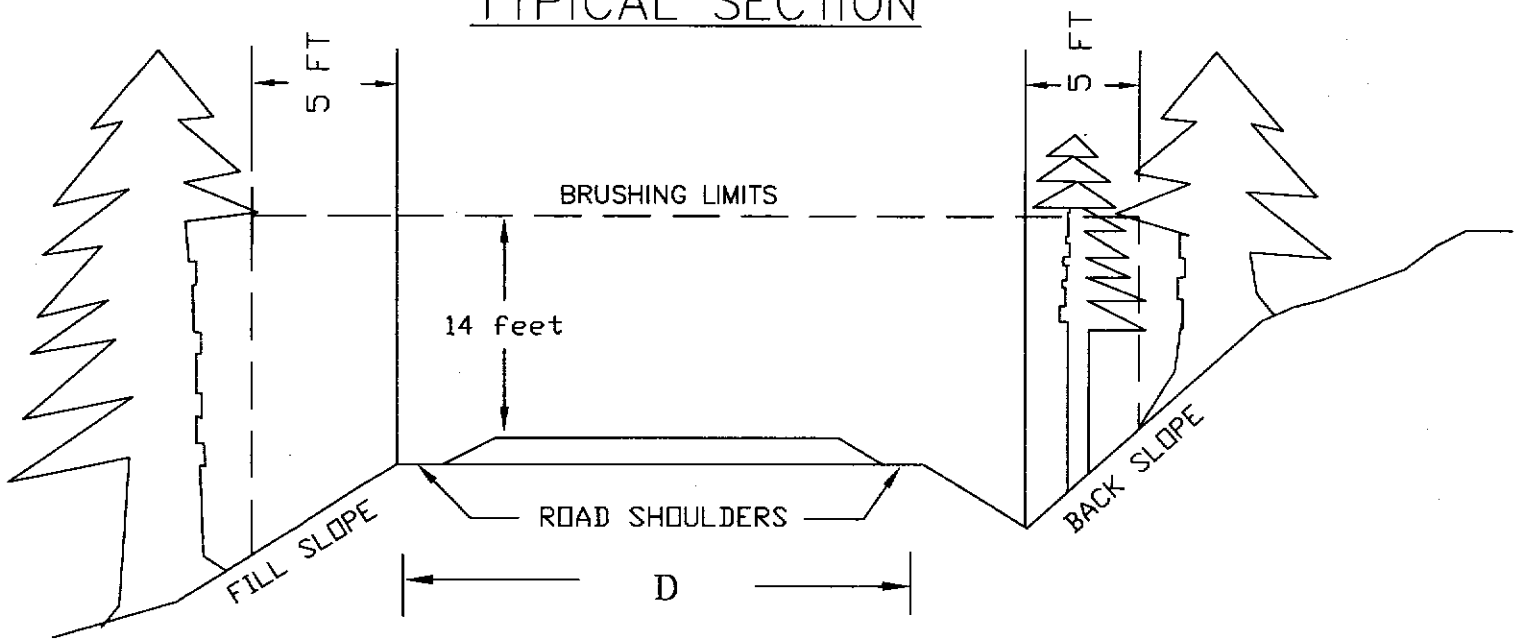
Regardless of other designation install all CMP's to have a minimum gradient necessary to achieve positive drainage.

All pipes require gaskets, indirect to respective 602 pay item.

Some installations of culverts may require additional excavation below grade line.

| SHEET | TOTAL SHEETS |
|---|---|
| 8 | 15 |

# NORTH FORK WIN THIN
# ROADSIDE BRUSHING DETAILS
## ROADS 1802, 1802150 & 1802159
## TYPICAL SECTION




1. Remove all vegetative growth inside the brushing limits, from the shoulders of the road or the bottom of the ditch, to a maximum height of 6 inches above ground surfaces.

2. Trees larger than 8 inches in diameter (when measured 6 inches above the ground) that do not interfere with ditch or surface maintenance are designated to remain.

3. Trim limbs on remaining trees from ground level to a clearing height limit of 14 feet above the travelway surface.

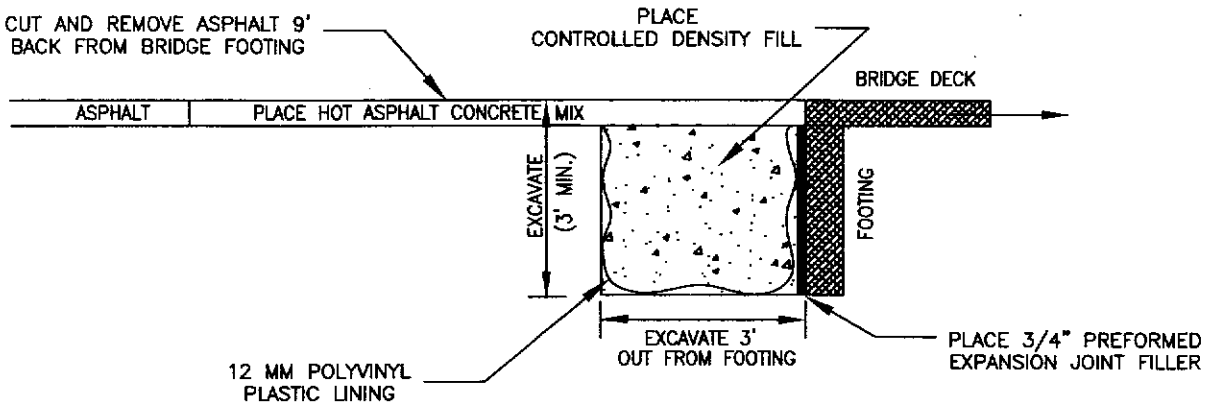
4. Grub and haul to designated disposal areas stumps within "D" above or as noted on the work descriptions.

5. Roads mechanically brushed may require manual scattering of cut material beyond the clearing limits.

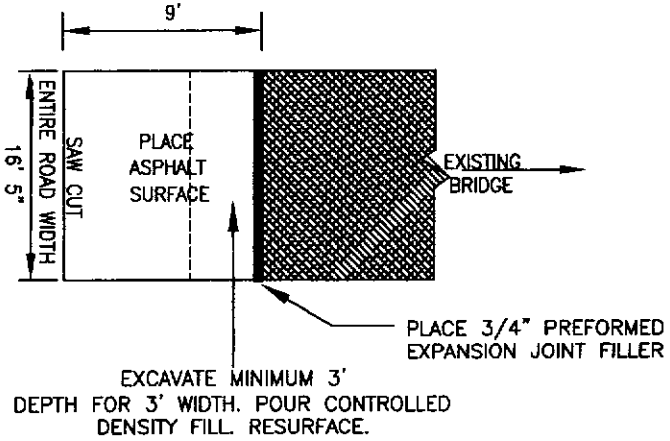
# NORTH FORK WIN THIN TIMBER SALE
# BRIDGE APPROACH CONSTRUCTION DETAILS

| SHEET NO. | TOTAL SHEETS |
|---|---|
| 9 | 15 |

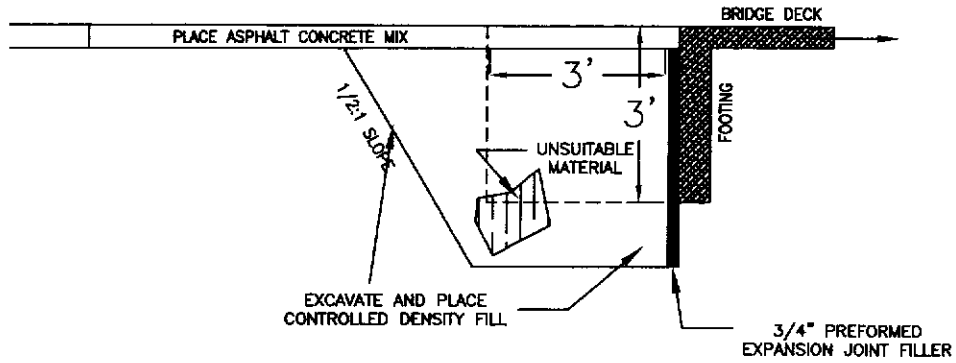
## PROFILE VIEW




## PLAN VIEW




## ALTERNATE PROFILE FOR UNSUITABLE MATERIAL



## RECONSTRUCTION SUMMARY ROAD 1802

| Mile Point | Pay Item | Quantity | Unit | Work Description |
|---|---|---|---|---|
| 5.60 | | | | Beginning of project. Existing cattle guard. |
| | 23051 | 3.48 | Mile | Begin roadside brushing. |
| 6.33 | 30304 | 0.03 | Mile | Begin ditch reconditioning. |
| 6.36 | 30304 | | | End ditch reconditioning. |
| 6.75 | 30304 | 0.06 | Mile | Begin ditch reconditioning. |
| 6.81 | 30304 | | | End ditch reconditioning. |
| 6.99 | 30304 | 0.05 | Mile | Begin ditch reconditioning. |
| 7.04 | 30304 | | | End ditch reconditioning. |
| 8.48 | | | | Enter Forest/Boundary |
| 8.82 | 25101 | 2 | Cubic Yard* | Place riprap 2'D x 3'H x 6'L to armor headwall around pipe inlet and catch basin. |
| | 20477 | 1 | Lump Sum | Re-construct outlet ditch with settling pond to achieve positive drainage. See sheet 5 of 15. |
| 8.84 | | | | Junction, roads 1802150, right and 1802160, left. Disposal area. |
| 9.00 | | | | Brush Creek, water source. |
| 9.08 | | | | End asphalt surface, begin aggregate surface. |
| | 23051 | | | End roadside brushing. |
| | 30359 | 5.62 | Mile | Begin reconditioning of roadway, maintain 5% crown, grub as necessary. Haul material from ditch reconditioning, slough and slide removal to disposal area. Scatter all logs and woody debris from top of cutbank to the opposite road shoulder outside clearing limits. Scarify minimum 1" below the depth of all potholes, washboards or surface irregularities. |
| 9.40 | 20253 | 2 | Each | Fall 1 danger tree, left. Fall 1 danger tree, right. |
| 9.44 | 20253 | 1 | Each | Fall 1 danger tree, left. |
| 9.61 | | | | Junction left, road1802164. |
| 9.66 | | | | Junction right, road to water source. |
| 9.77 | | | | Change from 5% crown to 2% (indirect to 30359). |
| 10.21 | 20253 | 3 | Each | Fall 3 danger trees, left. |
| 10.25 | 20253 | 3 | Each | Fall 3 danger trees, left. |
| 10.29 | 20253 | 1 | Each | Fall 1 danger tree, left. |
| 10.33 | 20253 | 1 | Each | Fall 1 danger tree, left. |
| 10.55 | 15757 | 1 | Each | Dewater stream/culvert inlet as needed to allow for work. |
| | 60709 | 1 | Lum Sum | Remove large boulder from inside culvert inlet and woody debris from inlet area. |
| 10.70 | 20253 | 2 | Each | Fall 2 danger trees, right. |

## RECONSTRUCTION SUMMARY ROAD 1802

| Mile Point | Pay Item | Quantity | Unit | Work Description |
|---|---|---|---|---|
| 10.94 | 20358 | 1 | Each | Remove existing CMP. |
| | 60276A | 42 | Foot | Install 18" CMP. Extend inlet 1'. |
| | 60655A | 20 | Foot | Install 18-inch full circle aluminized steel outlet pipe with 2 anchor sets and hinged elbow.. |
| | 60604 | 2 | Each | |
| | 60605 | 1 | Each | |
| | 32203 | 18 | Cubic Yard* | Place 8" crushed aggregate full depth for 15 feet centered over installed culvert with 15 foot tapers on each end and a 14' top width. Blend to adjacent road surfaces to provide a smooth transition. |
| | 20419B | 25 | Foot | Reconstruct 25' ditch into inlet as staked by C.O. |
| | 25101 | 5 | Cubic Yard* | Place 15' riprap apron around inlet up to road edge as staked by C.O.. |
| 11.44 | 20358 | 1 | Each | Remove existing CMP. |
| | 60276A | 36 | Foot | Install 18" CMP. Lower outlet 1'. |
| | 32203 | 13 | Cubic Yard* | Place 8" crushed aggregate full depth for 15 feet centered over installed culvert with 15 foot tapers on each end and a 16' top width. Blend to adjacent road surfaces to provide a smooth transition. |
| | 20419A | 20 | Foot | Construct outlet ditch. |
| 12.51 | | | | Junction right, road 1802158. |
| 12.57 | | | | Disposal area right. |
| 12.67 | 20253 | 2 | Each | Fall 2 danger trees, left. Change from 2% crown to 5% (indirect to 30359). |
| 12.75 | 20253 | 1 | Each | Fall 1 danger tree, right. Junction left, road 1821. |
| 13.15 | | | | Junction right, road 1802823. |
| 13.20 | | | | Junction left, road 1802156. |
| 13.34 | | | | Disposal area right. |
| 14.70 | | | | Point ten pit, right. |
| | 20253 | 9 | Each | Fall 9 danger trees as marked by CO. |
| | 32203 | 499 | Cubic Yard* | Spot rock as marked by CO. |
| | | | | End reconditioning of roadway. End of Project. |

## RECONSTRUCTION SUMMARY ROAD 1802150

| Mile Point | Pay Item | Quantity | Unit | Work Description |
|---|---|---|---|---|
| 0.00 | | | | Junction with road 1802. Begin project. |
| | 23051 | 1.12 | Mile | Begin roadside brushing. |
| | 30304 | 1.12 | Mile | Begin ditch reconditioning. |
| 0.11 | 20303 | 16.5 | SY | Remove existing asphalt 9' out from bridge footing. |
| | 57301 | 1 | Lump Sum | Construct bridge approach as shown on sheet 9. |
| | 40451 | 4.22 | Ton | Place HMAC full width for 9' for 4" depth (2 -2" lifts). |
| | 41001 | 11351.8 | SY | Begin slurry seal, type II. |
| 0.16 | 20253 | 1 | Each | Fall 1 danger tree,right. |
| | 40451 | 12.18 | Ton | Place leveling course and 77' X 16' X 1.5" overlay. |
| 0.19 | 40451 | 10.93 | Ton | Place leveling course and 65' X 17' X 1.5" overlay. |
| 0.25 | 20253 | 4 | Each | Fall 4 danger trees,right. |
| 0.30 | 20253 | 4 | Each | Fall 4 danger trees,right. |
| 0.32-0.36 | 40451 | 56.06 | Ton | Place leveling course and 270' X 21' X 1.5" overlay. |
| 0.43 | 40451 | 6.41 | Ton | Place leveling course and 37' X 17.5' X 1.5" overlay. |
| 0.47 | 40451 | 8.30 | Ton | Place leveling course and 40' X 21' X 1.5" overlay. |
| 0.49 | 40451 | 0.05 | Ton | Place leveling course in pothole. |
| 0.53 | 40451 | 0.04 | Ton | Place leveling course in pothole. |
| 0.54 | 40451 | 8.23 | Ton | Place leveling course and 52' X 16' X 1.5" overlay. |
| 0.56 | 40451 | 24.92 | Ton | Place leveling course and 140' X 18' X 1.5" overlay. |
| 0.60 | 40451 | 13.05 | Ton | Place leveling course and 88' X 15' X 1.5" overlay. |
| 0.61-0.64 | 40451 | 13.45 | Ton | Place leveling course and 80' X 17' X 1.5" overlay. |
| 0.64-0.68 | 40451 | 93.4 | Ton | Place leveling course and 322' X 22' X 2" overlay. |
| 0.69 | 20253 | 1 | Each | Fall 1 danger tree,right. |
| 0.73 | 40451 | 5.55 | Ton | Place leveling course and 33' X 17' X 1.5" overlay. |
| 0.83 | 40451 | 6.80 | Ton | Place leveling course and 43' X 16' X 1.5" overlay. |
| 0.84 | 20253 | 2 | Each | Fall 2 danger trees,right. |
| 0.85 | 20253 | 1 | Each | Fall 1 danger tree,left. |

## RECONSTRUCTION SUMMARY ROAD 1802150

| Mile Point | Pay Item | Quantity | Unit | Work Description |
|---|---|---|---|---|
| 0.90 | 40451 | 21.86 | Ton | Place leveling course and 85' X 26' X 1.5" overlay. |
| 0.93 | 20253 | 3 | Each | Fall 3 danger trees,right. |
| 0.96 | 40451 | 11.09 | Ton | Place leveling course and 66' X 17' X 1.5" overlay. |
| 1.00 | | | | Junction right, road 1802090. Junction left, spur road and dispersed site. |
| 1.02 | 20253 | 2 | Each | Fall 2 danger trees,left. |
| 1.04 | 20253 | 4 | Each | Fall 3 danger trees,left. Fall 1 danger tree, right. |
| 1.05 | 20253 | 2 | Each | Fall 2 danger trees,right. |
| 1.06 | 20253 | 4 | Each | Fall 4 danger trees,right. |
| 1.12 | | | | Junction left, road 1802159. |
| | 20253 | 2 | Each | Fall 2 danger trees as marked by CO. |
| | 40451 | 29.65 | Ton | Place leveling course and/or overlay as marked by CO. |
| | | | | End roadside brushing. |
| | | | | End ditch reconditioning. |
| | | | | End slurry seal, type II. |
| | | | | End of project. |

## RECONSTRUCTION SUMMARY ROAD 1802159

| Mile Point | Pay Item | Quantity | Unit | Work Description |
|---|---|---|---|---|
| 0.00 | | | | Junction with road 1802150. Beginning of project. |
| | 23051 | 2.97 | Mile | Begin roadside brushing |
| | 30359 | 2.97 | Mile | Begin reconditioning of roadway. Maintain 2% crown. |
| 0.03 | | | | End of asphalt apron. |
| 0.10 | 20253 | 3 | Each | Fall 3 danger trees, right. |
| 0.44 | | | | Junction left, road 1802855. |
| 0.55 | 20253 | 2 | Each | Fall 2 danger trees, right. |
| 0.74 | 20253 | 2 | Each | Fall 2 danger trees, left. |
| 1.07 | | | | Disposal area left. |
| 1.42 | 20253 | 1 | Each | Fall 1 danger tree, right. |
| 1.47 | 20253 | 1 | Each | Fall 1 danger tree, right. |
| 1.52 | | | | Junction left, road 1802191. |
| 1.58 | | | | Junction left, road 1802192. |
| 1.61 | 20253 | 1 | Each | Fall 1 danger tree, left. |
| 1.69 | 20253 | 3 | Each | Fall 2 danger trees, left. Fall 1 danger tree, right. |
| 1.78 | 20253 | 2 | Each | Fall 1 danger tree, left. Fall 1 danger tree, right. |
| 1.81 | | | | Junction right, spur road. |
| 1.83 | | | | Junction right, road 1802198. |
| 2.23 | 20253 | 1 | Each | Fall 1 danger tree, left. |
| 2.25 | 20253 | 1 | Each | Fall 1 danger tree, right. |
| 2.40 | | | | Disposal area left. Junction left, road 1802954. |
| 2.71 | 20253 | 2 | Each | Fall 2 danger trees, right. |

## RECONSTRUCTION SUMMARY ROAD 1802159

| Mile Point | Pay Item | Quantity | Unit | Work Description |
|---|---|---|---|---|
| 2.72 | 20358 | 1 | Each | Remove existing CMP. Remove existing outlet pipe and associated hardware from Forest Service land legally. |
| | 60276A | 30 | Foot | Install 18" CMP. Extend inlet 1'. |
| | 20420 | 1 | Each | Construct catch basin. |
| | 60655A | 20 | Foot | Install 18" full-circle outlet pipe. |
| | 60604 | 2 | Each | Install anchor sets. |
| | 60605 | 1 | Each | Install pipe elbow, hinged. |
| | 32203 | 12 | Cubic Yard* | Place 8" crushed aggregate full depth for 15 feet centered over installed culvert with 15 foot tapers on each end and a 14' top width. Blend to adjacent road surfaces to provide a smooth transition. |
| 2.97 | | | | Junction left, road 1802188. |
| | 20253 | 4 | Each | Fall 4 danger trees as marked by CO. |
| | 32203 | 268 | Cubic Yard* | Spot rock as marked by CO. |
| | | | | End roadside brushing. |
| | | | | End reconditioning of roadway. |
| | | | | End of project. |

FP- 03 SPECIFICATION LIST FOR NORTH FORK WIN THIN

**All specifications not included in the specification listing, but referenced by listed specifications, are applicable.**

**The supplements shown on the specification list are physically attached.**

| | Title | Revised | 1802 | 1802150 | 1802159 |
|---|---|---|---|---|---|
| | | | X | X | X |
| Preface | **Preface** | FP03 & 3/15/2004 | X | X | X |
| 101 | **Terms, Format, and Definitions** | FP03 | X | X | X |
| 101 .01 | Meaning of Terms | 1/22/2009 | X | X | X |
| 101 .01 | Meaning of Terms | 1/22/2009 | X | X | X |
| 101 .03 | Abbreviations | 6/16/2006 | X | X | X |
| 101 .04 | Definitions | 3/29/2007 | X | X | X |
| 101 .04 | Definitions | 11/6/2007 | X | X | X |
| 102 | **Bid, Award, and Execution of Contract** | FP03 | X | X | X |
| 102 | Delete entire section | 2/16/2005 | X | X | X |
| 103 | **Scope of Work** | FP03 | X | X | X |
| 103 | Delete 103.02 through 103.05 | 2/16/2005 | X | X | X |
| 104 | **Control of Work** | FP03 | X | X | X |
| 104 .00 | Delete 104.01, 104.02, 104.04 | 6/16/2006 | X | X | X |
| 104 .03 | Specifications and Drawings | 1/22/2009 | X | X | X |
| 104 .06 | Use of Road by Contractor | 2/17/2005 | X | X | X |
| 105 | **Control of Material** | FP03 | X | X | X |
| 105 .02 | Material Sources | 1/18/2007 | X | X | X |
| 105 .02 | Material Sources | 3/8/2007 | X | X | X |
| 105 .02 | Material Sources | 2/17/2005 | X | X | X |
| 105 .02 | Material Sources | 2/17/2005 | X | X | X |
| 105 .05 | Use of Materials Found in the Work. | 5/12/2004 | X | X | X |
| 106 | **Acceptance of Work** | FP03 | X | X | X |
| 106 .01 | Conformity with Contract Requirements | 7/31/2007 | X | X | X |
| 106 .07 | Delete | 5/11/2004 | X | X | X |
| 107 | **Legal Relations and Responsibility to the Public** | FP03 | X | X | X |
| 107 .05 | Responsibility for Damage Claims | 5/11/2004 | X | X | X |
| 107 .06 | Contractor's Responsibility for Work | 6/16/2006 | X | X | X |
| 107 .08 | Sanitation, Health and Safety | 3/29/2005 | X | X | X |
| 107 .09 | Legal Relationship of the Parties | 6/16/2006 | X | X | X |
| 108 | **Prosecution and Progress** | FP03 | X | X | X |
| 108 | Delete entire section | 2/16/2005 | X | X | X |
| 109 | **Measurement and Payment** | FP03 | X | X | X |
| 109 | Deletions 109.06 through 109.09 | 2/17/2005 | X | X | X |
| 109 .02 | Measurement Terms and Definitions | 6/16/2006 | X | X | X |
| 151 | **Mobilization** | FP03 | | X | |
| 156 | **Public Traffic** | FP03 | X | X | X |
| 156 .00 | Complete Specification | 4/17/2007 | X | X | X |
| 157 | **Soil Erosion Control** | FP03 | X | X | X |
| 157 .02 | Materials | 5/11/2008 | X | X | X |
| 170 .00 | Complete Specification - Develop Water Supply and Watering | 3/26/2007 | X | X | X |
| 201 | **Clearing and Grubbing** | FP03 | X | X | X |
| 201 .01 | Description | 2/18/2005 | X | X | X |
| 201 .02 | Material | 8/5/2009 | X | X | X |
| 201 .04 | Clearing. | 3/3/2005 | X | X | X |
| 201 .04 | Clearing. ( c ) | 2/22/2005 | X | X | X |
| 201 .04 | Clearing. | 2/18/2005 | X | X | X |
| 201 .06 | Disposal | 11/9/2005 | X | X | X |
| 203 | **Removal of Structures and Obstructions** | FP03 | X | X | X |
| 203 .01 | Description | 2/25/2005 | X | X | X |
| 203 .04 | Removing Material | 2/18/2005 | X | X | X |
| 203 .05 | Disposing of Material | 2/18/2005 | X | X | X |
| 203 .05 | Disposing of Material | 3/26/2007 | X | X | X |

FP- 03 SPECIFICATION LIST FOR NORTH FORK WIN THIN

All specifications not included in the specification listing, but referenced by listed specifications, are applicable.

The supplements shown on the specification list are physically attached.

| | Title | Revised | 1802 | 1802150 | 1802159 |
|---|---|---|---|---|---|
| | | | X | X | X |
| 204 | **Excavation and Embankment** | FP03 | X | X | X |
| 204 .00 | Complete Specification | 5/28/2008 | X | X | X |
| 209 | **Structure Excavation and Backfill** | FP03 | X | X | X |
| 209 .07 | Dewatering. | 7/12/2007 | X | X | X |
| 209 .10 | Backfill | 10/23/2007 | X | X | X |
| 209 .11 | Compacting | 2/24/2005 | X | X | X |
| 230 .00 | Complete Specification - Roadside Brushing | 3/31/2010 | X | X | X |
| 251 | **Riprap** | FP03 | X | | |
| 251 .03 | General | 8/5/2009 | X | | |
| 303 | Road Reconditioning | FP03 | X | X | X |
| 303 .01 | Work | 9/10/2008 | X | X | X |
| 303 .04 | Shoulder Reconditioning | 11/26/2008 | X | X | X |
| 303 .05 | Roadbed Reconditioning | 3/26/2007 | X | X | X |
| 303 .06 | Aggregate Surface Reconditioning | 4/4/2007 | X | X | X |
| 303 .10 | Measurement | 3/29/2005 | X | X | X |
| 303 .10 | Measurement | 3/26/2007 | X | X | X |
| 322 .00 | Complete Specification - Minor Aggregate Courses | 10/14/2011 | X | X | X |
| 404 | **Minor Hot Asphalt Concrete** | FP03 | | X | |
| 404 .02 | Composition of Mix (Job-Mix Formula). | 6/9/2006 | | X | |
| 404 .03 | Surface Preparation | 6/9/2007 | | X | |
| 404 .04 | Weather Limitations | 3/2/2005 | | X | |
| 404 .06 | Placing | 3/2/2005 | | X | |
| 404 .06 | Placing | 3/23/2007 | | X | |
| 404 .07 | Compacting (a) | 3/2/2005 | | X | |
| 404 .09 | Acceptance | 3/2/2005 | | X | |
| 573 .00 | **Bridge Repair** | 5/12/2004 | | X | |
| 601 | **Minor Concrete Structures** | FP03 | | X | |
| 601 .00 | Complete Specification | 2/27/2007 | | X | |
| 601 .02 | Table 601.02 Sampling and Testing Requirements | 3/2/2005 | | X | |
| 602 | **Culverts and Drains** | FP03 | X | X | X |
| 602 .03 | General | 9/6/2005 | X | X | X |
| 602 .03 | General | 10/2/2008 | X | X | X |
| 602 .03 | General | 3/17/2010 | X | X | X |
| 607 | **Cleaning, Reconditioning and Repairing of Existing Structures** | FP03 | X | | |
| 625 | **Turf Establishment** | FP03 | X | X | X |
| 625 .08 | Mulching (a) Dry method | 1/29/2009 | X | X | X |
| 635 | **Temporary Traffic Control** | FP03 | X | X | X |
| 635 .03 | General. | 5/13/2004 | X | X | X |
| 703 | **Aggregate** | FP03 | X | X | X |
| 703 .05 | Subbase, Base, & Surface Course and screened Aggregate | 8/14/2009 | X | X | X |
| 704 | **Soil** | FP03 | X | X | X |
| 704 .02 | Bedding Material. | 4/24/2008 | X | X | X |
| 704 .03 | Backfill Material. | 3/26/2007 | X | X | X |

# Preface



Delete all but the first paragraph and add the following:

The Forest Service, US Department of Agriculture has adopted FP-03 for construction of National Forest System Roads.

# 101 - Terms, Format, and Definitions

101.01_nat_us_01_22_2009

101.01 Meaning of Terms.

Delete all references to the TAR (Transportation Acquisition Regulations) in the specifications.

101.01_nat_us_01_22_2009

101.01 Meaning of Terms.

Delete all references to the FAR (Federal Acquisition Regulations) in the specifications.

101.03_nat_us_06_16_2006

101.03 Abbreviations.

Add the following to (a) Acronyms:

| | |
|---|---|
| AFPA | American Forest and Paper Association |
| MSHA | Mine Safety and Health Administration |
| NIST | National Institute of Standards and Technology |
| NESC | National Electrical Safety Code |
| WCLIB | West Coast Lumber Inspection Bureau |

Add the following to (b) SI symbols:

| | |
|---|---|
| mp | Milepost |
| ppm | Part Per Million |

101.04_nat_us_03_29_2007

101.03 Definitions.

Delete the following definitions and substitute the following:

**Bid Schedule**--The Schedule of Items.

**Bridge**--No definition.

**Contractor**--The individual or legal entity contracting with the Government for performance of prescribed work. In a timber sale contract, the contractor is the "purchaser".

**Culvert**--No definition.

**Right-of-Way**--A general term denoting (1) the privilege to pass over land in some particular line (including easement, lease, permit, or license to occupy, use, or traverse public or private lands), or (2) Real property necessary for the project, including roadway, buffer areas, access, and drainage areas.

Add the following:

**Adjustment in Contract Price**--"Equitable adjustment," as used in the Federal Acquisition Regulations, or "construction cost adjustment," as used in the Timber Sale Contract, as applicable.

**Change**--"Change" means "change order" as used in the Federal Acquisition Regulations, or "design change" as used in the Timber Sale Contract.

**Design Quantity**--"Design quantity" is a Forest Service method of measurement from the FS-96 *Forest Service Specifications for the Construction of Roads and Bridges.* Under these FP specifications this term is replaced by the term "Contract Quantities".

**Forest Service**--The United States of America, acting through the Forest Service, U.S. Department of Agriculture.

**Neat Line**--A line defining the proposed or specified limits of an excavation or structure.

**Pioneer Road**--Temporary construction access built along the route of the project.

**Purchaser**--The individual, partnership, joint venture, or corporation contracting with the Government under the terms of a Timber Sale Contract and acting independently or through agents, employees, or subcontractors.

**Protected Streamcourse**--A drainage shown on the plans or timber sale area map that requires designated mitigation measures.

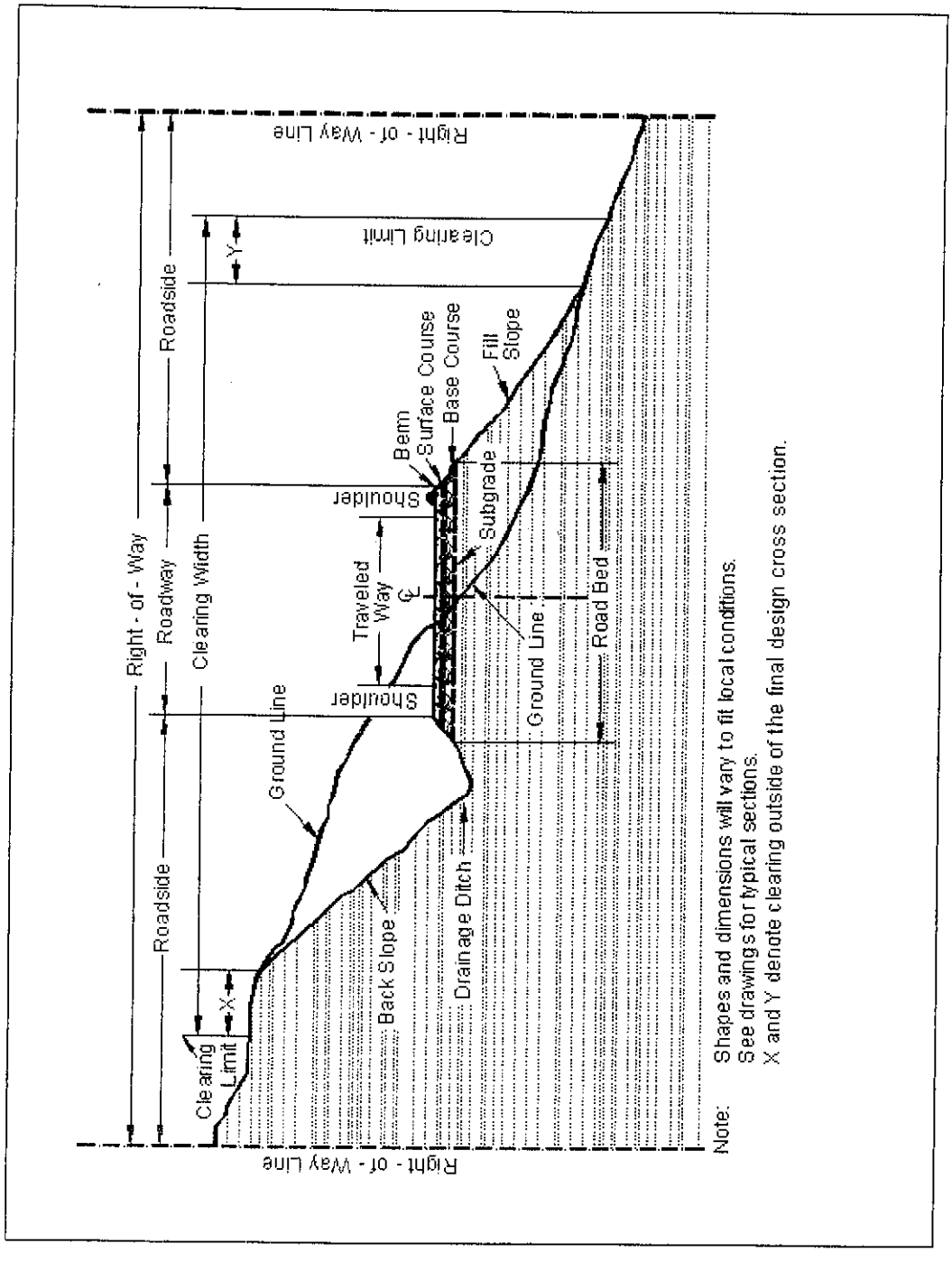
**Road Order**--An order affecting and controlling traffic on roads under Forest Service jurisdiction. Road Orders are issued by a designated Forest Officer under the authorities of 36 CFR, part 260.

**Schedule of Items**--A schedule in the contract that contains a listing and description of construction items, quantities, units of measure, unit price, and amount.

**Utilization Standards**--The minimum size and percent soundness of trees described in the specifications to determine merchantable timber.

Add Figure 101-1—Illustration of road structure terms:

Figure 101-1—Illustration of road structure terms.



Delete the following definitions:

Contract Modification

Day

Notice to Proceed

Solicitation

## 102 - Bid, Award, and Execution of Contract

102.00_nat_us_02_16_2005

Delete Section 102 in its entirety.

## 103 - Scope of Work

103.00_nat_us_02_16_2005

Delete all but subsection 103.01 Intent of Contract.

# 104 - Control of Work

104.00_nat_us_06_16_2006

Delete Sections 104.01, 104.02, and 104.04.

104.03_nat_us_01_22_2009

**Specifications and Drawings.**

Delete 104.03.

104.06_nat_us_02_17_2005

Add the following subsection:

The Contractor is authorized to use roads under the jurisdiction of the Forest Service for all activities necessary to complete this contract, subject to the limitations and authorizations designated in the Road Order(s) or described in the contract, when such use will not damage the roads or national forest resources, and when traffic can be accommodated safely.

# 105 - Control of Material

105.02_nat_us_01_18_2007

105.02 Material Sources

105.02(a) Government-provided sources

Add the following:

Comply with the requirements of 30 CFR 56, subparts B and H. Use all suitable material for aggregate regardless of size unless otherwise designated. When required, re-establish vegetation in disturbed areas according to section 625.

105.02_nat_us_03_08_2007

105.02 Material Sources.

105.02(a) Contractor-provided sources.

Add the following:

All material (e.g., soil, gravel, sand, borrow, aggregate, etc.) transported onto National Forest System land or incorporated into the work will be weed-free. The Contracting Officer may request written documentation of methods used to determine the weed-free status of any and all materials furnished by the contractor. Contractor-provided expertise and methods to establish weed-free status must be appropriate for the weeds of concern in the local area. The following applies to this contract:

*Weeds specific to this project*:

**Invasive Plant Species on the Willamette National Forest.: 2011**

| Potential Invaders | New Invaders | Established Infestations |
|---|---|---|
| Leafy spurge | Spotted knapweed | Canada thistle |
| Yellow starthistle | Diffuse knapweed | Bull thistle |
| Distaff thistle | Yellow toadflax | Scotch broom |
| Squarrose knapweed | Dalmatian toadflax | Tansy ragwort |
| Gorse | Japanese knotweed | St. Johns-wort |
| Orange hawkweed | Meadow knapweed | Foxglove |
| French broom | Climbing nightshade | Oxeye daisy |
| Garlic mustard | Field bindweed | |

| | |
|---|---|
| Himalayan knotweed | Evergreen blackberry* |
| Milk thistle | Himalayan blackberry* |
| Daphnia | False brome |
| | Reed canarygrass* |
| | Sweetclover |
| | Houndstongue |
| | English ivy |
| | Butterfly bush |
| | Yellow hawkweed |
| | Purple loosestrife |
| | Everlasting peavine |
| | Vinca |
| | Evening primrose |
| | Bladder campion |
| | Creeping buttercup |
| | Creeping charlie |
| | Yellowflag iris |
| | Shinyleaf geranium |
| | Sulphur cinquefoil |
| | Herb robert |
| | Depford pink |
| | Burdock |
| | Feverfew |
| | Anise |
| | Fennel |
| | Dead Needle |
| | Yellow Archangel |

* Species with a star may be considered either new or established weed infestations, depending on their densities. For example, blackberry at low elevations along river corridors are established, but single clumps at high elevations are newly invading. Reed canary grass around reservoir fringes is established but clumps around alpine lakes are newly invading.

105.02_nat_us_02_17_2005

105.02(a) Government Provided Sources.

There is no charge for riprap taken from Porcupine Pit.

105.02_nat_us_02_17_2005

105.02(a) Government Provided Sources.

(a) Government-provided sources. Add the following:

Government-provided sources for this project are identified as follows:

(1) Government-provided mandatory sources.

N/A

(2) Government-provided optional sources.

Material for use as **riprap** under Section 251 may be obtained from **Porcupine Pit .**

105.05_nat_us_05_12_2004

105.05 Use of Material Found in the Work.

Delete 105.05 (a) and (b) and the last sentence of the second paragraph and substitute the following:

Materials produced or processed from Government lands in excess of the quantities required for performance of this contract are the property of the Government. The Government is not obligated to make reimbursement for the cost of producing these materials.

# 106 - Acceptance of Work

106.01_nat_us_07_31_2007

106.01 Authority and Conformity of Requirements.

Delete Subsection 106.01 and substitute the following:

References to standard test methods of AASHTO, ASTM, GSA, and other recognized standard authorities refer to the methods in effect on the date of solicitation for bids.

Perform all work to the lines, grades, cross-sections, dimensions, and processes or material requirements shown on the plans or specified in the contract.

Incorporate manufactured materials into the work according to the manufacturer's recommendations or to these specifications, whichever is more strict.

Plan dimensions and contract specification values are the values to be strived for and complied with as the design values from which any deviations are allowed. Perform work and provide material that is uniform in character and reasonably close to the prescribed value or within the specified tolerance range. The purpose of a tolerance range is to accommodate occasional minor variations from the median zone that are unavoidable for practical reasons.

When standard manufactured items are specified (such as fence, wire, plates, rolled shapes, pipe conduits, etc., that are identified by gauge, unit mass, section dimensions, etc.), the identification will be considered to be nominal masses or dimensions. Unless specific contract tolerances are noted, established manufacturing tolerances will be accepted.

The Government may inspect, sample, or test all work at any time before final acceptance of the project. When the Government tests work, copies of test reports are furnished to the Contractor upon request. Government tests may or may not be performed at the work site. If Contractor testing and inspection is verified by the Government, the Contractor's results may be used by the Government to evaluate work for acceptance. Do not rely on the availability of Government test results for process control.

Acceptable work conforming to the contract will be paid for at the contract unit bid price. Four methods of determining conformity and accepting work are described in Subsections 106.02 to 106.05 inclusive. The primary method of acceptance is specified in each Section of work. However, work may be rejected at any time it is found by any of the methods not to comply with the contract.

Remove and replace work that does not conform to the contract, or to prevailing industry standards where no specific contract requirements are noted, at no cost to the Government.

(a) Disputing Government test results. **If the accuracy of Government test results is disputed, promptly inform the CO. If the dispute is unresolved after reasonable steps are taken to resolve the dispute, further evaluation may be obtained by written request. Include a narrative describing the dispute and a proposed resolution protocol that addresses the following:**

**(1)** Sampling method;

**(2)** Number of samples;
**(3)** Sample transport;
**(4)** Test procedures;
**(5)** Testing laboratories;
**(6)** Reporting;
**(7)** Estimated time and costs; and
**(8)** Validation process.

If the evaluation requires additional sampling or testing be performed, mutually agree with the Government on witnessing procedures and on sampling and testing by a third party laboratory. Use a third party laboratory accredited by the AASHTO accreditation program. Provide proof of the laboratory's accreditation for the test procedures to be used. Do not use the same laboratory that produced the disputed Government test results or that produced the test results used as a basis for the dispute.

The CO will review the proposed resolution protocol and may modify it before final approval and execution.

The Government will use the approved resolution protocol test results to determine the validity of the disputed testing. If the Government test results are validated, the Contractor will be responsible for all costs associated with developing and performing the resolution protocol. If the Government test results are not validated, the Government will be responsible for all costs associated with developing and performing the resolution protocol. If the validity of the Government test results cannot be determined, the Contractor and Government will equally share all costs associated with developing and carrying out the resolution protocol.

**(b) Alternatives to removing and replacing non-conforming work.** As an alternative to removal and replacement, the Contractor may submit a written request to:

**(1)** Have the work accepted at a reduced price; or

**(2)** Be given permission to perform corrective measures to bring the work into conformity.

The request must contain supporting rationale and documentation. Include references or data justifying the proposal based on an evaluation of test results, effect on service life, value of material or work, quality, aesthetics, and other tangible engineering basis. The CO will determine disposition of the nonconforming work.

106.07_nat_us_05_11_2004

106.07 Delete.

Delete subsection 106.07.

107.05_nat_us_05_11_2004

107.05 Responsibility for Damage Claims.

Delete the entire subsection.

107.06_nat_us_06_16_2006

107.06 Contractor's Responsibility for Work.

Delete the following from the first paragraph.

"except as provided in Subsection 106.07".

107.08_nat_us_03_29_2005

107.08 Sanitation, Health, and Safety.

Delete the entire subsection.

107.09_nat_us_06_16_2006

107.09 Legal Relationship of the Parties.

Delete the entire subsection.

# 108 - Prosecution and Progress

108.00_nat_us_02_16_2005

108.00 Delete.

Delete Section 108 in its entirety.

# 109 - Measurement and Payment

109.00_nat_us_02_17_2005

109.00 Delete.

Delete the following entire subsections:

**109.06 Pricing of Adjustments.**

**109.07 Eliminated Work.**

**109.08 Progress Payments.**

**109.09 Final Payment.**

109.02_nat_us_06_16_2006

109.02 Measurement Terms and Definitions.

**(b) Contract quantity**.

Add the following:

Contract quantities will be adjusted only when there are errors in the original design of 15% or more.

Change the following:

"(b) Cubic yard" to "(c) Cubic yard".

Add the following definition:

**(p) Thousand Board Feet (Mbf).** 1,000 board feet based on nominal widths, thickness, and extreme usable length of each piece of lumber or timber actually incorporated in the job. For glued laminated timber, 1,000 board feet based on actual width, thickness, and length of each piece actually incorporated in the job.

# 156 - Public Traffic

156.00_nat_us_04_17_2007

Delete Section 156 in its entirety and replace with the following:

## Description

**156.01** This work consists of controlling and protecting public traffic adjacent to and within the project.

## Material

**156.02** Conform to the MUTCD and the following Sections and Subsections:

| | |
|---|---|
| Construction sign panels | 633 |
| Retro-reflective sheeting | 718.01 |
| Temporary concrete barrier | 618 |
| Temporary plastic fence | 710.11 |
| Temporary traffic control devices | 718.22 |

**156.03 General.** Unless otherwise provided for in Table 156-1, keep existing roads open to all traffic during road improvement work, and maintain them in a condition that will adequately accommodate traffic. Delays may not exceed 60 minutes at any one time followed by an open period of no less than _15_ minutes.

Perform no work that interferes or conflicts with traffic or existing access to the roadway surface until a traffic control plan has been approved. Post construction signs and traffic control devices in conformance with MUTCD. All required signs will be in place and approved prior to beginning work on project.

If the Contractor agrees in writing to allow public traffic to use a new road being constructed prior to completion, it will be considered an existing road for traffic control purposes.

**156.04 Temporary Traffic Control.** Install and maintain temporary traffic control devices adjacent to and within the project as required by the approved traffic control plan and the MUTCD. Install and maintain traffic control devices as follows:

**(a)** Furnish and install traffic control devices before the start of construction operations.
**(b)** All detours outside of clearing limits will be approved in writing by the Contracting Officer as part of the traffic control plan.
**(c)** Install only those traffic control devices needed for each stage or phase.
**(d)** Relocate temporary traffic control devices as necessary.
**(e)** Remove devices that no longer apply to the existing conditions.
**(f)** Immediately replace any device that is lost, stolen, destroyed, or inoperative.
**(g)** Keep temporary traffic control devices clean.
**(h)** Remove all temporary traffic control devices upon contract completion or when approved.
**(i)** When required, use flaggers certified by the American Traffic Safety Services Association, the National Safety Council, the International Municipal Signal Association, a state agency, or other acceptable organization. Perform the work described under MUTCD Part 6. Use type III, VII, VIII, or IX retroreflective sheeting on flagger paddles. Do not use flags. Flaggers must wear high visibility safety apparel as required by MUTCD 6E.02.

**156.05 Temporary Closures.** Road segments may be closed as shown in Table 156-1. The maximum consecutive days of closure shall be followed by a minimum number of consecutive days open to traffic as shown. Maintain traffic control devices during closure period(s). Appropriate barricades and signs will be erected and maintained as shown in the traffic control plan or as otherwise designated.

Prior to closing roads during construction, give written notice to the Contracting Officer at least 10 days in advance.

**Table 156-1**

**Temporary Road Closures**

| Road Number | From Terminus | To Terminus | Maximum Consecutive Days of Closure | Minimum Consecutive Days Open |
|---|---|---|---|---|
| 1802 | | | 1 | 1 |
| 1802150 | | | 1 | 1 |
| 1802159 | | | 1 | 1 |
| | | | | |

**156.06 Acceptance.** Public traffic work will be evaluated under Subsection 106.02.

## Measurement and Payment

**156.07** Do not measure Public Traffic for payment. Compensation is made as an indirect payment.

# 157 - Soil Erosion Control



**Materials**

**157.02** Add the following:

Coarse Aggregate for Concrete.....703.02

Watertight Gaskets.....712.03

**Construction Requirements**

**157.03 General.** Add the following:

21 days prior to the start of construction, submit a written plan that provides specific sediment control measures to minimize delivery of soil and turbidity into the stream during the construction period. Include the sequence of operations and information on equipment, materials and suppliers. Measures given in the Plans and Supplemental Specifications are minimum requirements, and may be revised only with written approval by the CO.

The turbidity of the water 100-200 feet downstream shall not be visually greater than the turbidity of the water upstream of the project site.

When this turbidity requirement or other erosion control measures are not met, immediately take corrective action. Cease operations that are causing turbidity and pump the stream around the construction site according to this specification and the Plans until the turbidity requirement can be met. When the interpretation of this requirement is in question, measure turbidity using a turbidity meter as approved by the CO, and provide documentation that operations are in compliance with FAR 52.236-7 Permits and Responsibilities, subsection 107.01 Laws to be

Observed and subsection 107.10 Environmental Protection, and subsection 107.11, including but not limited to, the requirements of the National Marine Fisheries Service.

Do not begin work until the necessary controls for that particular phase of work have been implemented. Incorporate all erosion control features into the project at the earliest practicable time, as agreed by the CO.

Operate in a manner that will avoid harm to aquatic organisms whenever possible.

Notify the CO of the intention to dewater the stream, at least 72 hours in advance (not including weekends and holidays). Do not re-route the stream until approved by the CO. The CO will not approve dewatering until a fisheries biologist and other Government personnel are present and prepared to rescue aquatic organisms. Dewater the stream slowly and incrementally in order to facilitate the fish rescue. The rescue operation will generally take several hours.

Do not release water through the newly constructed simulated streambed until approved by the CO. After approval, release water slowly and incrementally over a period of at least one hour, or as approved by the CO. During this time, treat any water that does not meet the requirements of the turbidity standard stated in this specification.

**157.04 Controls and Limitations on Work.** Add the following:

When erosion control materials are to be left on site after the project has been completed, construct erosion controls of organic and bio-degradable materials whenever possible.

**157.09 Diversions.** Add the Following:

Stream diversion, related appurtenances and measures.

(a) Stream Bypass Dam and Pipe. Construct a sandbag dam and bypass pipe as shown on the Plans or as approved by the CO.

(1) Primary Bypass Dam. Construct the Sandbag Dam in a dry condition by first pumping the stream around the dam. Place temporary cofferdams as needed. Remove irregularities from the streambed to form smooth bedding for the bypass dam. Place the dam so that water does not seep from the downstream side of the dam; if seepage occurs, improve the dam by adding sandbags, improving or adding seals, or other means to minimize seepage from the dam. When it is impossible to eliminate seepage, construct a sump and pump clear water to the upstream side of the dam.

(2) Bypass Dam Impermeable Membrane. Place an impermeable membrane within the sandbag dam and entrenched in the streambed as shown on the Plans or approved by the CO. When approved by the CO, a small amount of granular bentonite may be used along the edges of the membrane to minimize seepage between the membrane and the streambed. Cut a hole in the membrane to fit the bypass pipe and seal the membrane to the Bypass Pipe or the Bypass Pipe Collar using gaskets, adhesive strips or other approved methods.

(3) Bypass pipe. Place bypass pipe as shown on the Plans or approved by the CO. Place the upstream invert of the pipe at the lowest point in the stream channel as practical. Install joints and elbows as shown on the Plans and as needed to accommodate the site layout. Use watertight seals meeting the requirements of Subsection 712.03. Do not place backfill until the pipe joints have be approved by the CO. Allow water to pass through pipe only after a downstream splash apron has been prepared in a manner that will protect the stream from scour and turbidity, and protect fish from harm. Construct the bypass in a manner that avoids injury to aquatic organisms.

(4) Downstream Dam. When water flows into the work area from downstream, construct a cofferdam as needed to prevent water from entering the work area.

(5) Sandbags. Prior to placing the lower rows of sandbags, remove the larger rocks or other irregularities from the streambed to form a smooth bed. Use only clean sand or coarse concrete aggregate in the sandbags. Loosely fill and tamp the sandbags in place to minimize seepage between, under, and around the bags.

(6) Bypass Pipe Collar. Install and maintain a leak-proof pipe collar as shown on the Plans or approved by the CO.

(b) Pumps. Install pumps as required to re-route stream around construction site and dewater foundations. When failure of a pump would result in movement of sediment or turbidity beyond the work area, provide a back-up pump that is readily available. Use the pumps for installing and removing the gravity bypass pipes and dams, at other times to facilitate construction operations, and during storms to supplement the gravity bypass. Equip the pump with approved fish screens, appropriate suction and discharge hoses, fittings and flow regulation equipment as needed. Insure that the pumps are clean, free of leaks and that the oil used as lubricant in the pump seal systems is food grade mineral oil. Install

and operate pumps in a manner that will avoid impingement of small fish against the intake screens.

(1) Pump intakes. Use one of the following methods of screening on all draft hoses:

i. Perforated Plate; screen openings shall not exceed 3/32 or 0.0938-inches

ii. Profile Bar Screen; the narrowest dimension in the screen openings shall not exceed 0.0689-inches in the narrowest direction.

iii. Woven Wire Screen; screen openings shall not exceed 3/32 or 0.0938-inches the narrow direction.

Check intakes frequently and clean as needed with wire brushing, flushing, or any other acceptable method.

(2) Sump Pumps. Supply pumps capable of dewatering the structure foundation. Insure that pumps are clean and free of leaks. Remove sediment and turbidity in the Sump Pump discharge water prior to re-entering the stream.

(c) Sump Water Discharge. Discharge sump water as shown on the Plan or as approved by the CO. Apply one or more methods to remove sediment from sediment-laden water. Apply additional methods as needed to eliminate increase in downstream turbidity. Use the following methods as needed:

(1) Natural Vegetation/Soil Dispersal and Filtration. Discharge sump water onto areas of ground most advantageous for dispersal and filtration of sediment, e.g. flat heavily vegetated soil. When single point discharge does not function adequately, discharge water into a perforated pipe or series of pipes laid approximately level so that the brown water disperses over a wide area.

(2) Silt Bag Filtration. Discharge sump water into one or more Silt Bags. Silt Bags are constructed of Mirafi 180N (or approved equal) with sewn seam strengths of 90% efficiency according to ASTM D4632. Construct bag to hold and filter sump water. Place silt bag(s) on level ground having layer of straw one foot thick minimum.

(3) Settling Basin. Discharge sump water into one or more Basins. The Basins may be pre-manufactured tanks, folding tanks, geotextile or membranes placed over a sandbag or weed-free straw berm, or other similar basins designed to separate sediment from the water.

(4) Suspended Sediment Coagulation Agent. When other methods do not function adequately, add an approved coagulation agent to water prior to discharging the water onto natural vegetation, Silt Bag, or Settling Basin. Use a flocculation agent such as Chitisan-based Storm-Klear Gel-Floc, or approved equal. Use Suspended Sediment Coagulation Agent according to manufacturer's recommendations.

(d) Sedimats. Place Sedimats across the streambed as shown on the Plans or approved by the CO. The Sedimat is a proprietary product manufactured by Indian Valley Industries, Inc. and distributed by Columbia Storage Inc., Vancouver Washington, phone: (800) 426-7976. Use Sedimats according to manufacturer's recommendations.

(d) Simulated Streambed. After placement of the simulated streambed rock materials as shown on the Plans, wash the fines from the surface of the new streambed and remove the sediment using a downstream sump pump. Provide temporary sandbag dam if needed.

**157.13 Maintenance & Cleanup.** Add the following:

When removing sandbags, spread sand away from the waterway; if coarse concrete aggregate meeting the requirements of Section 703.02 is used in the sandbags, the gravel may be distributed evenly across the waterway.

Remove geotextile and other non-biodegradable materials used in dewatering and sediment control operations from Government property, unless otherwise approved by the CO.

# 170 - Develop Water Supply and Watering

170.00_0618_us_03_26_2007

## Description

**170.01** This work consists of developing an acceptable water supply, furnishing, hauling, and applying water.

## Materials

**170.02** Conform to the following subsection.

| | |
|---|---|
| Water | 725.01. |

## Construction Requirements

**170.03 Development of Supply & Access.** Develop water supplies and access to the water supplies as required. Use designated water sources or other approved water sources. Before using non-designated water sources, obtain all necessary permissions, water rights, and permits.

**170.04 Equipment.**

**(a) Water tanks.** Provide mobile watering equipment with watertight tanks of known capacity. Provide for positive control of water application from the driver's position.

**(b) Juvenile fish protection.** All draft hoses being used to withdraw water from any live flowing stream or pond will utilize one of the following methods of screening.

**(1) Perforated plate:** Screen opening shall not exceed 3/32 or 0.0938-inches.

**(2) Profile bar screen:** The narrowest dimension in the screen openings shall not exceed 0.0689-inches in the narrowest direction.

**(3) Woven wire screen:** Screen openings shall not exceed 3/32 or 0.0938-inches in the narrow direction.

All methods shall be cleaned frequently with either wire brushing, flushing or other acceptable method.

**170.05 Application.** Apply water uniformly without ponding or washing.

**170.06 Acceptance.** Developing water supplies and watering will be evaluated under Subsections 106.02 and 106.04.

## Measurement and Payment

**170.07** See Subsection 109.05.

Do not measure develop water supply and watering for payment.

# 201 - Clearing and Grubbing

201.01_nat_us_02_18_2005

201.01 Description

Replace with the following

This work consists of clearing and grubbing within clearing limits and other designated areas.

201.00_nat_us_08_05_2009

201.02 Material.

Delete Tree wound dressing material reference.

**201.03 General.**

Delete the last sentence.

**201.04 Clearing.**

Delete the last sentence of (d).

201.04_nat_us_03_03_2005

**Construction Requirements**

201.04 Clearing.

Add the following:

Utilization standards for merchantable timber are listed below. Fall and buck merchantable material into lengths not to exceed 40 feet. Pieces (logs) meet utilization standards when such pieces would have met Utilization Standards if bucking lengths were varied to include such material.

**Minimum Utilization Standards**

| Length | Diameter (Inside Bark) at Small End | 40% Net Scale in % of Gross Scale |
|---|---|---|
| 8 feet | 6 inches | |

201.04_nat_us_02_22_2005

201.03 footing. (c)

Delete paragraph (c) and replace with the following:

(c) In areas outside the excavation, embankment, and slope rounding limits, cut stumps to within 12 inches or one-third of the stump diameter of the ground, whichever is higher, measured on the side adjacent to the highest ground. For timber sales, stump heights will meet the requirements of the Timber Sale contract.

**201.04 Clearing.**

Delete subsection (d) and replace with the following:

(d) Do not cut vegetation less than 3 feet tall and less than 3 inches in diameter, that is within the clearing limits but beyond the roadway and not in a decking area, and that does not interfere with sight distance along the road.

Add the following:

(e) Trim branches of remaining trees or shrubs to give a clear height of 14 feet above the roadbed unless otherwise indicated. Trim tree limbs as near flush with the trunk as practicable.

(f) Remove brush from log decks. Deck logs so that logs are piled parallel to one another; can be removed by standard log loading equipment; will not damage standing trees; will not interfere with drainage, and will not roll. Keep logs in log decks free of brush and soil.

201.04_nat_us_02_18_2005

201.04 Clearing.

Add the following:

When marked in advance, remove dead trees over 6 inches in diameter measured at 12 inches above the ground that lean toward the road and are tall enough to reach the roadbed.

201.06_nat_us_11_09_2005

201.06 Disposal

Delete the first sentence of this paragraph and substitute the following:

Limb and deck logs that meet utilization standards at locations approved by the CO or otherwise designated. Deck logs according to 201.04 (f).

# 203 - Removal of Structures and Obstructions

203.01_nat_us_02_25_2005

203.01 Description.

Delete and replace with the following:

This work consists of disposing of construction slash and debris, salvaging, removing, and disposing of buildings, fences, structures, pavements, culverts, utilities, curbs, sidewalks, and other obstructions.

203.04_nat_us_02_18_2005

203.04 Removing Material.

Replace the fourth and fifth paragraphs with the following:

Where part of an existing culvert is removed, remove the entire culvert upstream from the removal. The remaining downstream culvert may be left in place if no portion of the culvert is within 12 inches of the subgrade, embankment slope, or new culvert or structure; and the culvert ends are sealed with concrete.

Remove structures and obstructions in the roadbed to 12 inches below subgrade elevation. Remove structures and obstructions outside the roadbed to 12 inches below finished ground or to the natural stream bottom.

203.05_nat_us_02_18_2005

203.05 Disposing of Material.

Add the following:

**(e) Windrowing Construction Slash.** Place construction slash outside the roadway in neat, compacted windrows approximately parallel to and along the toeline of embankment slopes. Do not permit the top of the windrows to extend above subgrade. Use construction equipment to matt down all material in a windrow to form a compact and uniform pile. Construct breaks of at least 15 feet at least every 200 feet in a windrow. Do not place windrows against trees. Obtain approval for pioneer roads. A pioneer road may be constructed to provide an area for placement of windrows, provided the excavated material is kept within the clearing limits and does not adversely affect the road construction.

**(f) Scattering.** Scatter construction slash outside the clearing limits without damaging trees. Limb all logs. Place logs and stumps away from trees, positioned so they will not roll, and are not on top of one another. Limb and scatter other construction slash to reduce slash concentrations.